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10/637,172	08/07/2003	Guruprasad Ramarao	200300376-1	2912
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EXAMINER PICH, PONNOREAY				
ART UNIT 2435		PAPER NUMBER		
NOTIFICATION DATE 04/28/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/637,172

**Applicant(s)**

RAMARAO ET AL.

**Examiner**

Ponnoreay Pich

**Art Unit**

2435

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4/2/10 has been entered.

Claims 1-20 are pending.

### ***Response to Amendments and Arguments***

Applicant's amendments were fully considered. Applicant's arguments directed at the amended claims were also fully considered, but are not persuasive. Applicant states that applicant does not understand that Copeland teaches the new limitation amended onto the independent claims and that because of this Copeland teaches away from the new limitations. The examiner respectfully submits that Copeland does in fact teach the new limitations added by applicant. As such, Copeland cannot teach away from what he teaches are features of his invention. See further clarification below.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

1. Claim 1 has been amended to state that the mapped port assignment was created when an application registered a service provided by the application with said port mapper at the time said application was brought up.... There does not appear to be any written support in the application as originally filed for this limitation. While the examiner does see in the specification support for a service being registered, i.e. bound to a particular port (p15 of specification), there is no disclosure of the registering being done by the application that was brought up. Note that the application being brought up doing the registering further does not appear to be an inherent feature of applicant's invention as originally disclosed since some other application other than the one being brought up could have done the registering. For example, an application that was already brought up could monitor applications being brought up and register services for applications being brought up thereby creating a mapped port assignment. Claims 8 and 15 recite similar limitations which also do not have written support in the specification as originally filed.
2. Claims not specifically addressed are rejected due to dependency.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claims 1, 8, and 15 each recites "said identified service", which lacks antecedent basis.
2. Claims 8 and 15 each recites "said port binding information" which lacks antecedent basis.
3. Claims not specifically addressed are rejected due to dependency.
4. Applicant should fully review the claim set for any other informalities.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

1. As per *In re Bilski*, 545 F3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008), for a method claim to be statutory, the steps must either be tied to a particular machine or the steps must transform an article of manufacture. It is submitted that claim 1 as

written fails both the tests as set forth by *In re Bilski* as each of the steps could be performed by a human alone. For example, the access step could refer to a person reading port binding information which has been printed as a first list on paper or displayed on a monitor. Note that in the case that the first list is displayed on a monitor for the person to read, the displaying is an insignificant step as no particular machine is needed—any generic machine capable of displaying information would suffice, thus the machine used for displaying is an insignificant component to the steps of the method. The querying step also could refer to the same person reading information regarding which ports are currently being used by a service off a second list that is either printed on paper or displayed on a screen. The determining step could be accomplished by the person manually comparing both the aforementioned lists to see if there are any ports on the second list that are not on the first list. The initiating step could be accomplished by the person telling an administrator that a port was found on the second list that was not on the first list.

2. Claims 2-7 are also not statutory because despite the further limitations recited therein, these limitations also fail the tests set for by *In re Bilski*.
3. Claim 8 is directed towards a “network port map verification tool” comprising a port assignment file (which is non-functional descriptive material), and a port assignment file verifier, which could broadly, but reasonably be interpreted to be software per se (i.e. functional descriptive material per se). Because each of the elements claim 8 are merely descriptive material per se, claim 8 is not statutory

as descriptive material by itself does not fall within any of the four statutory categories of invention. Applicant can overcome this rejection by claiming some form of hardware as part of the claimed tool.

4. Claim 9 describes a network the claimed tool of claim 8 is used with, however, does not add anything which requires the tool to be interpreted as anything other than descriptive materials per se. As such, claim 9 is also non-statutory.
5. Claims 10-14 describes actions the tool of claim 8 is programmed to take. However, these limitations also do not add anything which requires the tool to be interpreted as anything more than descriptive materials per se, thus these claims are also not statutory.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-6, 8-11, 14-18, and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Copeland III (US 2002/0144156).

#### **Claim 1:**

Copeland discloses:

1. Accessing port binding information, which includes an identification and an authorized port of an authorized service, in a port authorization file in said

network (paragraphs 62-63 and 74). *Stored "profile list" contains list of allowed protocols, operations, and ports.*

2. Querying a port mapper (i.e. seen today list) for a mapped port assignment, which was created when an application registered a service provided by the application with said port mapper at the time said application was brought up, said mapped port assignment includes a current port used by said registered service (paragraphs 64, 69-73, and 123). *In each Mode, new services are automatically detected, including "current activities". This implies that if an application which was just brought up registers a service and a new port is mapped for that service, port profile engine 155 would detect the new mapped port assignment in the "seen today list".*
3. Determining if said identified service is currently using said authorized port by comparing said mapped port assignment to said port binding information (paragraphs 66, 88, 103, and 123).
4. Initiating a response to said comparing (paragraphs 87 and 103). *Alarm is raised if port in "seen today list" does not match authorized ports as specified in the stored port profile of allowed network services.*

**Claim 8:**

Copeland discloses:

1. A port assignment file (i.e. "profile list") comprising a port authorization, which includes an authorized port of an authorized service, in said network (paragraphs 62-63 and 74).



2. A port assignment file verifier (paragraphs 62 and 129; i.e. port profiling engine 155), wherein said verifier is enabled to verify a port assignment against said port authorization (paragraphs 62) by,
  - a. Querying a port mapper (i.e. seen today list) for a mapped port assignment, which was created when an application registered a service provided by the application with said port mapper at the time said application was brought up, said mapped port assignment includes a current port used by said registered service (paragraphs 64, 69-73, and 123). *In each Mode, new services are automatically detected, including "current activities". This implies that if an application which was just brought up registers a service and a new port is mapped for that service, port profile engine 155 would detect the new mapped port assignment in the "seen today list".*
  - b. Determining if said identified service is currently using said authorized port by comparing said mapped port assignment to said port binding information (paragraphs 66, 88, 103, and 123).
  - c. Initiating a response to said comparing (paragraphs 87 and 103). *Alarm is raised if port in "seen today list" does not match authorized ports as specified in the stored port profile of allowed network services.*

**Claim 15:**

Copeland discloses:

1. A network server coupled to a network (paragraph 41 and Figures 1-2).

2. A network client communicatively coupled with said network server via a port (paragraph 41).
3. A plurality of provisionable services (i.e. network services) enabled to communicate with said network server via a plurality of ports (paragraphs 45 and 62).
4. A port map verification tool (paragraphs 62 and 129; i.e. port profiling engine 155) enabled to compare a port assignment to a port authorization, which includes an authorized port of an authorized service (paragraphs 62 and 132), in said network by,
  - a. Querying a port mapper (i.e. seen today list) for a mapped port assignment, which was created when an application registered a service provided by the application with said port mapper at the time said application was brought up, said mapped port assignment includes a current port used by said registered service (paragraphs 64, 69-73, and 123). *In each Mode, new services are automatically detected, including "current activities". This implies that if an application which was just brought up registers a service and a new port is mapped for that service, port profile engine 155 would detect the new mapped port assignment in the "seen today list".*
  - b. Determining if said identified service is currently using said authorized port by comparing said mapped port assignment to said port binding information (paragraphs 66, 88, 103, and 123).

- c. Initiating a response to said comparing (paragraphs 87 and 103). *Alarm is raised if port in "seen today list" does not match authorized ports as specified in the stored port profile of allowed network services.*

**Claims 2, 9, and 16:**

Copeland further discloses wherein said network comprises a utility data center, i.e. server (paragraphs 38-39).

**Claim 9:**

Claim 9 is also alternatively rejected for the same reasons given in claim 8. The wherein clause further recited in claim 9 does not appear to further limit the structure of the claimed network port map verification tool. Instead, the clause further defines the network, which is not a part of the claimed network port map verification tool. As such, the wherein clause further recited in claim 9 is not given patentable weight, see MPEP 2111.04.

**Claim 3:**

Copeland further discloses wherein said mapped port assignment comprises static port binding data (paragraphs 44-45 and Fig 2, host data 166).

Note that frequently used services are assigned fixed/static port numbers. The HTTP service, for example, is bound to static port 80.

**Claim 4:**

Copeland further discloses wherein said port authorization file comprises fixed port assignments (paragraphs 44-45 and 81 and Fig 2, host data 166).

**Claim 5:**

Copeland further discloses wherein said port authorization file is generated upon network initialization (paragraph 74).

**Claims 10 and 17:**

Copeland further discloses wherein said network port map verification tool is further enabled to initiate a response, i.e. alarm, to a port assignment anomaly (paragraph 66).

**Claims 6, 11, and 18:**

Copeland further discloses wherein said response comprises an alarm (paragraph 66).

**Claims 14 and 20:**

Copeland further discloses wherein said network port map verification tool is enabled to operate in a remote procedure call environment (paragraph 61).

A client-server environment is a remote procedure call environment since the server executes various procedures depending on remote requests received from the client.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copeland III (US 2002/0144156) in view of Hrabik et al (US 6,988,208).

**Claims 7, 12, and 19:**

As per claim 7, Copeland does not explicitly disclose wherein said response comprises a system lockdown. However, this limitation is disclosed by Hrabik (col 7, lines 16-24).

Both Copeland and Hrabik are concerned with computer and network security. At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art of computer and network security to modify Copeland's invention according to the limitations recited in claim 7 as per Hrabik's teachings. One skilled would have been motivated to do so because a system lockdown in response to an intrusion detection would minimize the amount of damage an intruder can cause to the system.

Claims 12 and 19 further recite a limitation substantially similar to what is recited in claim 7 and are rejected for much the same reasons discussed in claim 7.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Copeland III (US 2002/0144156) in view of Nickles (US 6,134,591).

**Claim 13:**

As per claim 13, Copeland does not explicitly disclose wherein said network port map verification tool is enabled to verify a digital signature related to said port authorization. However, Nickles discloses a security server enabled to verify a digital signature related to a access request (col 10, lines 10-38). Note that an access request to a server typically includes the port number a client wishes to access or be authorized to access, thus access authorization is related to port authorization. As such the digital signature taught by Nickles is related to port authorization.

At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to modify Copeland's invention according to the limitations further recited in claim 13 by incorporating the digital signature verification functions of the security server disclosed by Nickles within the network port map verification tool of Copeland's invention. One of ordinary skill would have been motivated to do so because it would allow Copeland's invention to verify the identity of the person making a connection request. This would enhance the security of networks protected by Copeland's invention since unauthorized port access could be prevented rather than just detected.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is (571) 272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ponnoreay Pich/  
Primary Examiner, Art Unit 2435